IN THE CLAIMS

Please amend the claims as follows:

1-3. (Canceled)

4. (Currently Amended) An integrated circuit (IC) burn-in system comprising:

a computer system comprising a processor operating under the control of a computer program; and

at least one IC comprising:

interface circuitry to interface the at least one IC to the computer system; and

a thermal sense circuit, coupled to the interface circuitry, to provide a temperature indication that is proportional to a [[the]] junction temperature of the at least one IC;

wherein the computer system is to compare the temperature indication with a temperature value determined by the computer program;

wherein if the temperature indication substantially matches the temperature value, the computer system is to bin the at least one IC at that temperature value; and

wherein if the temperature indication is less than the temperature value, the computer system is to decrement the temperature value and compare the temperature indication with the decremented temperature value.

5. (Canceled)

6. (Previously Presented) The IC burn-in system recited in claim 4, wherein the at least one IC further comprises:

logic circuitry coupled to the interface circuitry; and

wherein the logic circuitry is to be responsive to the temperature indication generated by the thermal sense circuit;

wherein the logic circuit is also to be responsive to a temperature value generated by the computer system as determined by the computer program;

wherein the logic circuitry is to compare the temperature indication with the temperature value;

wherein if the temperature indication substantially matches the temperature value, the logic circuitry is to generate a first indication to the computer system, and the computer system is to bin the at least one IC at that temperature value; and

wherein if the temperature indication is less than the temperature value, the logic circuitry is to generate a second indication to the computer system, and the computer system is to decrement the temperature value and compare the temperature indication with the decremented temperature value.

7-32. (Canceled)

33. (Currently Amended) The IC burn-in system recited in claim 4 [[5]], wherein the interface circuitry is to receive the temperature value from the computer system and to send the temperature indication to the computer.

34. (Previously Presented) The IC burn-in system recited in claim 33, wherein the at least one IC further comprises a storage circuit coupled to the interface circuitry to store the temperature value.

35. (Currently Amended) An integrated circuit (IC) burn-in system comprising:

a computer system comprising a processor; and

an IC comprising:

interface circuitry to interface the IC to the computer system; and

a thermal sense circuit, coupled to the interface circuitry, to provide a temperature indication that is proportional to a [[the]] junction temperature of the IC;

wherein the computer system is to compare the temperature indication with a temperature value;

wherein if the temperature indication substantially matches the temperature value, the computer system is to bin the IC at that temperature value; and

wherein if the temperature indication is less than the temperature value, the computer system is to decrement the temperature value and compare the temperature indication with the decremented temperature value.

36. (Canceled)

37. (Previously Presented) The IC burn-in system recited in claim 35, wherein the IC further comprises:

logic circuitry coupled to the interface circuitry; and

wherein the logic circuitry is to be responsive to the temperature indication generated by the thermal sense circuit;

wherein the logic circuit is also to be responsive to a temperature value generated by the computer system;

wherein the logic circuitry is to compare the temperature indication with the temperature value;

wherein if the temperature indication substantially matches the temperature value, the logic circuitry is to generate a first indication to the computer system, and the computer system is to bin the IC at that temperature value; and

wherein if the temperature indication is less than the temperature value, the logic circuitry is to generate a second indication to the computer system, and the computer system is to decrement the temperature value and compare the temperature indication with the decremented temperature value.

38. (Currently Amended) The IC burn-in system recited in claim 35 [[36]], wherein the interface circuitry is to receive the temperature value from the burn-in system and to send the temperature indication to the burn-in system.

39. (Previously Presented) The IC burn-in system recited in claim 38, wherein the IC further comprises a storage circuit coupled to the interface circuitry to store the temperature value.

40-45. (Canceled)